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With F. Nicholson's Kind regards.
June, 1907.

Notes on the Palæarctic Species of
Coal-Tits.

BY

FRANCIS NICHOLSON, F.Z.S., &c.

MANCHESTER:
36, GEORGE STREET.

Price One Shilling and Sixpence.

August 15th, 1906.

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XIII. Notes on the Palæarctic Species of Coal-Tits.

By FRANCIS NICHOLSON, F.Z.S., &c.

Received and read April 10th, 1906.

During a visit to London in 1903, I obtained eleven specimens of the Cyprian Coal-Tit (*Parus cypriotes* of Dresser), eight males and three females, which I have presented to the Manchester Museum. On comparing these birds with the series of Coal-Tits in the British Museum, I made the following notes, which may be of some interest to ornithologists.

In 1894, an excellent series of papers on the Coal-Tit (*Parus ater*) and its allies was published by the late Mr. J. P. Pražák in the *Schwalbe*, the Journal of the Ornithological Club of Vienna, and these essays were afterwards published by him in a collected form in a pamphlet of 44 pages, entitled, "Einige Bemerkungen über die Tannenmeise (*Parus ater*, L.) und ihr nahestehende Formen." He recognised the following races, and gave their full synonymy and geographical distribution.

1. *Parus ater*.
2. *Parus ater britannicus*.
3. *Parus ater cypriotes*.
4. *Parus ater michalowskii*.
5. *Parus ater phaeonotus*.
6. *Parus ater aemodius*.
7. *Parus ater rufpectus*.
8. *Parus ater pekinensis*.

August 15th, 1906.

I do not intend in the present short article to reproduce the whole of the synonymy so elaborately detailed by Mr. Pražák, but the following notes occur to me.

Mr. Pražák, in speaking of the typical Coal-Tit of Europe, which is *Parus ater* of Linnæus (founded on the Scandinavian species), includes Great Britain and Ireland as within its range. In proof of the last-named locality, he quotes Thompson's "Birds of Ireland," and Seebohm's paper on Irish birds in the *Ibis* for 1890 (p. 400); but in these instances the name of *Parus ater*, Linn., for the Irish bird was given by Thompson in ignorance that the British Coal-Tit was different from the typical continental form, and by Seebohm doubtless from conservative notions of nomenclature. The Coal-Tit of Ireland is the same as that of England and Scotland, viz., *Parus britannicus*, and is not *Parus ater*, which is the species of Scandinavia and the continent of Europe. *Parus britannicus* is the resident species of the British Islands, although the true *P. ater* is said to occur occasionally in England. I have never myself seen an English specimen of *P. ater*, and there is not one individual in the collection of the British Museum or the Manchester Museum, but that occasional specimens are to be met with cannot be doubted. Considering the hordes of tiny Goldcrests that annually migrate to the eastern coasts of Britain, there is nothing wonderful in the appearance of an occasional Coal-Tit from Scandinavia. Our British bird has an olive-brown back in its full winter plumage, but as this plumage gets worn during the breeding season, it becomes more grey, and it then resembles in some slight degree the grey-backed *P. ater*, but this latter species is blue-grey both in summer and winter, and the comparison of a series shows that the two birds are really quite distinct.

I agree with Dr. Bowdler Sharpe's observations on

the two species ("Handb. Brit. Birds," vol. I, p. 137), where he remarks that, although in worn plumage during the nesting season, *P. britannicus* may lose some of its olive tint through the wearing away of the edges of the feathers, yet there is never any real difficulty in distinguishing our native bird from the true *P. ater*, which can only be considered an occasional visitor to the British Islands.

Mr. Pražák has given the full synonymy of *Parus ater*, and assigns to it the following geographical range:—France, Portugal*, Spain, Italy, Sicily, Sardinia†, Switzerland, Belgium, Holland, Germany, Denmark, Norway, Sweden, Austria, Hungary, Bosnia, Herzegovina, Servia, Montenegro, Bulgaria, Greece, Macedonia, Asia Minor, Palestine, Poland, Baltic Provinces, Russia generally, throughout Siberia to Amur Land, Kamtchatka, Ussuri Land, Askold Island, Japan, and the Liu Kiu Islands.‡

He likewise includes the island of Formosa, and hereby recalls a ludicrous episode in the history of ornithology. In Horsfield and Moore's "Catalogue of the Birds in the Museum of the East India Co." (vol. I, p. 373), a specimen of *Parus ater* from Formosa is recorded as having been presented by Mr. John Gould. This specimen has now passed into the collection of the British Museum, and is undoubtedly only an example of the ordinary *Parus britannicus*. It has been prepared by Mr. Gould's own hands, and is evidently a bird procured by him, or by Mr. William Briggs, at 'Formosa,' Sir George Young's beautiful place on the Thames, near Cookham. In middle age, so I am informed by Dr. Bowdler Sharpe, who used frequently to meet him,

* Now separated as *Parus vieira*, mihi.

† Now separated as *Parus sardus*, Kleinschmidt.

‡ Now separated as *Parus insularis*, Hellmayr.

Mr. Gould was a constant visitor to 'Formosa,' when Mr. De Vitré lived there. The head-gardener, Briggs, was a first-class naturalist, and was always on the look-out for specimens for Mr. Gould, when he was writing his "Birds of Great Britain." This is no doubt the way in which the specimen of *P. ater* from 'Formosa' came into Mr. Gould's possession, and was afterwards given by him to the Indian Museum.

It will be noticed further on that the Coal-Tit of Japan has been separated recently by Mr. Hellmayr under the name of *Parus insularis* (*vide infra*, p. 8).

In Mr. Dresser's "Manual of Palæarctic Birds" (vol. 1, 1902, pp. 164—167), *Parus ater* is recognised, with 2 sub-species, *P. britannicus* and *P. cypriotes*. *P. michalowskii* is united to *P. phaeonotus*, and *P. rufpectus* is made a sub-species of the latter bird, whereas, in my opinion, it belongs to the long-crested section of the Coal-Tits, being closely allied to *P. pekinensis*, which Mr. Dresser unites with *P. ater*.

Dr. Bianchi published in 1902 a very useful "Handlist" of the *Paridae* in the *Annuaire* of the Petersburg Museum, and this was the foundation of Dr. Bowdler Sharpe's synopsis of the family, in his "Handlist of Birds" (vol. 4, 1903).

In 1903 appeared part 18 of "Das Tierreich," in which Dr. Hellmayr monographed the *Paridae*, with all that care which he bestows on every one of his undertakings. It is a very fine piece of work, and leaves little to criticise, although the system of nomenclature may not commend itself to all of us.

Mr. Hellmayr places the following species and sub-species in his sub-genus *Periparus*.

1. *Parus rubidiventris* Blyth.
2. *Parus rufonuchalis* Blyth, with two sub-species.

- a. *P. rufonuchalis rufonuchalis* Blyth.
- b. *P. rufonuchalis beavani* (Jerdon).
- 3. *Parus melanolophus* Vigors.
- 4. *Parus ater* Linn, with 11 sub-species.
 - a. *P. ater britannicus* Sharpe & Dresser.
 - b. *P. ater cypristes* Dresser.
 - c. *P. ater ater* Linn.
 - d. *P. ater insularis* Hellmayr.
 - e. *P. ater pekinensis* David.
 - f. *P. ater michalowskii* Bogd.
 - g. *P. ater atlas* Meade-Waldo.
 - h. *P. ater phaeonotus* W. Blanford.
 - i. *P. ater aemodius* Hodgson.
 - k. *P. ater rufipectus* Severtzoff.
 - l. *P. ater ledouci* Malh.

Mr. Hellmayr places *P. rufipectus*, Severtz, and *P. aemodius*, Hodgs., in the same section, on account of the ochre-yellow or pale cinnamon colour of the under surface, distinguishing the latter by its smaller size and long crest. In *P. aemodius* the crest-feathers are certainly abnormally developed for a member of the genus *Parus*.

P. rufipectus, Severtz. Of this species I examined several specimens on my last visit to the British Museum, from the Seeböhm and Menzbier collections. In the same year (1873), Severtzoff gave two names to this species, *Parus piceae* and *P. ater* var. *rufipectus*. The former of these, being a *nomen nudum*, has been disallowed by subsequent authorities, and the name of *rufipectus* insisted upon. This method is perfectly correct, but in one respect it is to be regretted, as *rufipectus* does not invariably convey the impression of the colour of the bird's breast, which has often nothing especially *rufous* about it. A specimen from Thian Shan shews a faint

tinge of buff below, of much the same shade as in *P. pekinensis* and *P. insularis*, and from this I consider that *P. rufipectus* is more closely allied to *P. pekinensis*, both as regards colour and development of crest. The Thian Shan example is, in fact, a large edition of *P. pekinensis*. There are also examples from Transcaspia in the British Museum, some of them as pale below as the Thian Shan bird, while others are as cinnamon as *P. aemodius*.

P. ater of Europe appears to me to be the lightest in colour of all the pale-breasted group of which it is the type. It certainly has a whiter breast than most of the others.

P. pekinensis is, according to Mr. Hellmayr, an inhabitant of Southern Siberia, east of the Yenesei River and North China. Its distinguishing character is its very evident top-knot of long feathers. This feature is certainly developed in specimens from the far East to a greater extent than in typical *P. ater*, but the latter species is by no means devoid of a crest. Some examples of *P. pekinensis*, however, have nearly as long a crest as in *P. aemodius*, and it seems to me that the white spots on the wing-coverts are more conspicuous than in *P. ater*.

Of *P. pekinensis* I have examined several specimens in the British Museum. One from the Ussuri River (Lat. 48° N.: Dybowski) has quite long crest-feathers, and has a warm ochraceous-buff tint on the sides of the body, the lower back and rump being also washed with a light shade of ochraceous-buff. I have also examined, in the British Museum, one of the typical specimens given to the late Robert Swinhoe by Abbé David, and bequeathed to the Museum by Mr. Seebohm. It is from Pekin, and is a somewhat remarkable bird, not only on account of the tuft of long feathers on the crown, but from its rufescent under surface, wherein the breast and flanks are of a

distinct fawn-colour, approaching that of *P. rufipectus*, Severtz. The date of the specimen is December 14, 1867, so that it is in full winter plumage. I have elsewhere remarked on the difference in the colour of the under parts shewn by *P. rufipectus*, which has also a long crest similar to that of *P. pekinensis*, and has a rufous breast when in full feather, which fades to a sort of creamy fawn-colour in worn plumage.

I find that the same difference exists in *P. pekinensis*. A specimen from Kuatun, presented to the British Museum by Mr. C. B. Rickett, and obtained in May, is in very worn plumage, and is therefore very much paler below than the Pekin bird; it has an evanescent tinge of fawn-colour, and also an extraordinary crest of elongated plumes. No one examining either of these specimens of *P. pekinensis* could doubt the distinctness of the species from *P. ater*, and I can only suppose that Mr. Dresser had not examined these birds in the British Museum when he determined to unite the two species in his recently published "Manual of Palæarctic Birds."

Another specimen in the British Museum which I also consider to be *P. pekinensis* is a female bird from Chemulpo in Corea (C. W. Campbell: Seebohm Coll.), but those from the Gulf of the Amur, Ussuri Land, and Kamtchatka seem to be true *P. ater*, as do the birds from Krasnoyarsk. Siberian birds are slightly more fawn-coloured below, and shew some approach to *P. rufipectus*.

A specimen from the Gulf of the Amur River, collected by the brothers Doerries, and bequeathed by Seebohm to the British Museum, cannot be separated from *P. ater*, as it has no more crest than that species. The white bars on the wing, are, however, somewhat broader, and there is a distinct tinge of buff on the under-parts, especially on the flanks, though the rump is scarcely

tinged. A longer series of specimens from Eastern Siberia may prove that the Coal-Tit of the far East may be separable from the European species.

In the British Museum are birds from Irkutsk and Krasnoyarsk which I refer to *P. ater*, not to *P. pekinensis*, and I believe it to be a mistake to record the latter species from the Valley of the Yenesei.

P. insularis, Hellmayr, from Japan, is, as might have been expected, very closely allied to *P. pekinensis*, but there is a much more decided tinge of fawn-colour on the flanks, and it has the same conspicuous white spots on the wing-coverts. There is also a fulvescent tinge on the rump. Of the brown- or olive-backed section it is also difficult to write down the distinctive characters, but Mr. Hellmayr has given the characters which I enumerate below.

P. cypriotes, Dresser, is the darkest race of this whole section, the back being not so much olive-brown as dusky-grey, with an olive-brown wash. The smoky-brown tinge of the sides of the body is also much darker and less inclined to buff than in any of the other forms, and the black on the throat extends further on to the chest.

P. phaeonotus, Blanford, is a somewhat larger and browner bird, with a very little admixture of grey on the back. The sides of the body are of a pale fawn tint.

P. atlas, Meade-Waldo, from Morocco, is a representative of *P. phaeonotus*, but with the sides of the body darker and more smoky-brown.

P. moltchanowii is described by Professor Menzbier from the Crimea as a very distinct form, allied to *P. phaeonotus*.

P. michalowskii, Bogd. has a very stout bill, and has pale fawn-coloured flanks, but somewhat deeper in tint than *P. phaeonotus*. It is very closely allied to the latter species, but is a little darker brown.

P. britannicus, Sharpe and Dresser, is, when specimens in fresh plumage are compared, one of the most distinct of all the races of *P. ater*, remarkable for its olive-toned back, and the pronounced fawn-buff colour of the flanks. It has a very weak bill compared with that of its allies.

In 1905 was published part 3 of Dr. Hartert's monumental work "Die Vögel der paläarktischen Fauna," and he recognises the following forms of *Parus ater* and its allies.

Parus ater ater, Linn.—Europe to 65° N. Lat., apparently through N. Siberia to Kamtchatka. In Europe to the mountains of Spain, Italy, and Sicily.

Parus ater britannicus, Sharpe and Dresser.—British Isles.

Parus ater sardus, Kleinschmidt.—Sardinia.

Parus ater atlas, Meade-Waldo.—Atlas Mountains, Morocco.

Parus ater pekinensis, David.—N. China and Manchuria, probably west to the Yenesei Valley.

Parus ater aemodius, Hodgs.—E. Himalayas, eastwards to mountains of Kansu and Shensi in W. China.

Parus ater insularis, Hellm.—Japanese Islands (Yezo, Hondo, Liu Kiu Islands).

Parus ater rufipectus, Severtz.—From E. Thian-Shan Mountains to Issik-Kul.

Parus ater cypriotes, Dresser.—Cyprus.

Parus ater ledouci, Malh.—N. Algeria and N. Tunis.

Parus ater moltchanowii, Menzb.—Southern Crimea.

Parus ater derjugini, Sarudny and Loudon.—N. Armenia (Lasistan).

Parus ater michalowskii, Bogd.—Caucasus Mountains to Lenkoran.

Parus ater phaeonotus, Blanf.—Persia and S. Transcaspia.

Parus rufonuchalis rufonuchalis, Blyth.—Turkestan ; Himalayas, from Gilgit to Gurwhal.

Parus rufonuchalis beavani, Jerd.—Nepal, Sikhim, eastward to W. China.

The conclusions arrived at by Dr. Hartert are, as will be seen by the above summary, confirmatory of those of Dr. Hellmayr. His work bears evidence of great care and judgment, and in future studies of the Palæarctic Coal-Tits, Hartert's essay must receive ample consideration.

Parus ater sardus, of Kleinschmidt, was described in the *Ornithologische Monatsbericht* for 1903 (p. 180).

Another species recently described is *Parus schwederi* (*Parus ater schwederi*, Loudon and Tschusi, *Orn. Jahrb.* vol. 16, p. 140, 1904). *Hab.* Livonia, Baltic Provinces. Dr. Hartert (*t.c.*, p. 356) does not consider this form separable from true *P. ater*.

The following is a list of the species of the sub-genus *Periparus*, or, as I prefer still to call them, *Parus ater*, and its immediate allies. This list is founded on the recent works of Hellmayr and Hartert.

Parus rubidiventer.

Parus rubidiventris, Blyth, *J. A. S. Beng.*, vol. 16, p. 445 (1847).

Lophophanes rubidiventris, Jerd, "B. Ind.," vol. 2, p. 274 (1863);

Oates, "Faun. Brit. Ind., Birds," vol. 1, p. 58 (1889);

Hartert, "Vög. Pal. Fauna," p. 362 (1905).

Parus (*Periparus*) *rudiventris*, Hellmayr, "Tierreich, Paridae," p. 74 (1902).

Periparus rubidiventris, Bianchi, *Ann. Mus. Zool. Acad. St. Petersb.*, vol. 7, p. 245 (1902).

Periparus rubidiventer, Sharpe, "Handl. B.," vol. 4, p. 326 (1903).

No white tips to the wing-coverts ; under surface of body rusty-red on the centre of the breast and abdomen.

Hab. Himalaya Mountains, from Kumaon to Nepal.

Parus rufinuchalis.

Parus rufonuchalis, Blyth, *J. A. S. Beng.*, vol. 18, p. 810 (1849).

Lophophanes rufonuchalis, Jerd., "B. Ind.," vol. 2, p. 273 (1863).

Lophophanes rufinuchalis, Oates, "Faun. Brit. Ind., Birds," vol. 1, p. 58 (1889).

Parus (Periparus) rufonuchalis, Hellmayr, "Tierreich, Paridae," p. 75 (1902).

Periparus rufinuchalis, Bianchi, *Ann. Mus. St. Petersb.*, vol. 7, p. 246 (1902); Sharpe, "Handl. B.," vol. 4, p. 326 (1903).

Parus rufonuchalis rufonuchalis, Hartert, "Vög. Pal. Fauna," vol. 1, p. 361 (1905).

No white tips to the wing-coverts; breast and abdomen grey; throat and chest black. Size larger.

Hab. Russian Turkestan; Afghanistan; Mountains of Gilgit, N. Kashmir.

Parus beavani.

Lophophanes beavani, Jerd., "B. Ind.," vol. 2, p. 275 (1863, ex Blyth MSS.); Oates, "Faun. Brit. Ind., Birds," vol. 1, p. 59 (1889).

Periparus beavani, Bianchi, *Ann. Mus. St. Petersb.*, vol. 7, p. 245 (1902); Sharpe, "Handl. B.," vol. 4, p. 326 (1903).

Parus (Periparus) rufonuchalis beavani, Hellmayr, "Tierreich, Paridae," p. 75 (1903).

Differs from *P. rufinuchalis* in its smaller size, and in having only the throat black.

Hab. E. Himalayas, Nepal to Sikhim; to W. China (Kansu, Kokonor).

Parus melanolophus.

Parus melanolophus, Vigors, *P.Z.S.*, vol. 1 (1830), p. 23; Hartert, "Vög. Pal. Faun.," part 3, p. 362 (1905).

Lophophanes melanolophus, Hume, "Nests and Eggs, Ind. B.," p. 403 (1874); Oates, "Faun. Brit. Ind., Birds," vol. 1, p. 57 (1889).

Parus (Periparus) melanolophus, Hellm., "Tierreich, Paridae," p. 76 (1902).

Periparus melanolophus, Bianchi, *t.c.*, p. 245; Sharpe, "Handl. B.," vol. 4, p. 326 (1903).

With distinct white spots on the median and greater wing-coverts; under surface of body grey.

Hab. N.-W. Himalayas, from Kumaon to Murree and Kashmir (Gilgit), Mountains of Afghanistan.

Parus ater.

Parus ater, Linn., "Syst. Nat.," vol. 1, p. 341 (1766); Pražák, *t.c.*, p. 4 (1894); Dresser, "Man. Pal. Birds," vol. 1, p. 164 (1902).

Parus (Periparus) ater ater, Hellmayr, "Tierreich, Paridae," p. 78 (1902).

Periparus ater, Bianchi, *t.c.*, p. 245; Sharpe, "Handl. B.," vol. 4, p. 325 (1903).

Parus ater ater, Hartert, "Vög. Pal. Fauna," part 3, p. 356 (1905).

With white spots on the median and greater wing-coverts; under surface of body whitish, with the sides distinctly washed with rust-colour; back ashy-blue; no distinct crest or top-knot; rump with a slight wash of olive-yellowish.

Hab. The whole of Europe and Siberia to the Gulf of the Amur and Kamtchatka.

In addition to its blue-grey back, the sandy-buff sides of the body are, in *P. ater*, decidedly duller in colour, and incline to smoky-brown. Scandinavian specimens are very clear blue-grey, but show a faint tinge of olive in the winter dress. A similar faint shade of olive is to be found on a few birds from the Vosges Mountains, obtained in October and November, but otherwise birds from Eastern France, Holland, and Belgium appear to be identical with those from Norway. Birds from Asia Minor are rather paler blue.

Parus insularis.

Parus ater (nec Linn.) Seebohm, "B. Japan, Emp.," p. 82 (1890), et auct.

Parus ater insularis, Hellm., *Orn. Jahrb.*, vol. 13, p. 36 (1902); Hartert, "Vög. Pal. Fauna," part 3, p. 359 (1905).

Parus (Periparus) ater insularis, Hellm., "Tierreich, Paridae," p. 75 (1903).

Periparus insularis, Sharpe, "Handl. B.," vol. 4, p. 325 (1903).

Mr. Hellmayr characterises this species as follows :— Similar to *P. ater*, and with the same bluish-grey back, but of a lighter and purer blue shade; rump as in *P. britannicus*, light olive-yellowish grey; under surface of body light olive-reddish-yellow, similar to that of *P. britannicus*.

P. insularis is of a very pure ashy-blue on the back. It only differs from *P. pekinensis* in its pale fulvescent under surface, which is rather lighter than in the latter bird. The crest is well developed, but does not form so distinct a tuft as in *P. pekinensis*. Some specimens are, however, hardly distinguishable.

Parus pekinensis.

Parus pekinensis, David, *Ibis*, 1870, p. 155.

Parus ater pekinensis, Pražák, *MT. Orn. Ver. Wien*, vol. 18, p. 32 (1894); Hartert, "Vög. Pal. Fauna," part 3, p. 358 (1905).

Parus (Periparus) ater pekinensis, Hellmayr, "Tierreich, Paridae," p. 78 (1903).

Periparus pekinensis, Bianchi, *t.c.*, p. 245; Sharpe, "Handl. B.," vol. 4, p. 325 (1903).

Similar to *P. ater*, with a blue-grey back, and large spots on the median and greater coverts, but distinguished by a very distinct top-knot or crest on the crown.

Hab. Corea. China (Pekin to Foh-kien).

Mr. Hellmayr's diagnosis is as follows: Similar to *P. ater*, but distinguished by an apparently well-developed crest on the hinder head. Nape-patch generally mixed with spots of blackish. Upper surface ashy-bluish, sometimes washed with olive-colour on the lower back. Rump rusty-yellowish; otherwise resembling *P. ater* in tint. Under surface whitish, the sides of the body washed with pale rusty-yellowish colour.

Mr. Hellmayr gives the range of *P. pekinensis* as Southern Siberia, east of the Yenesei, to China. As already mentioned in my note on *P. ater*, I cannot agree that the birds from the Yenesei in the Seeböhm collection belong to *P. pekinensis*, but I consider that they are typical *P. ater*.

In the British Museum are specimens of *P. pekinensis* from Pekin (*David: Seeböhm Coll.*); Kuatun (*Rickett Coll.*); Nikolaiesk (*Seeböhm Coll.*); N. Ussuri Land (*Seeböhm Coll.*); Chemulpo, Korea (*Campbell*), Kamchatka (*Seeböhm Coll.*).

Parus rufipectus.

Parus ater var. *rufipectus*, Severtz., "Turkestanskje Jevotnie," pp. 66, 134 (1873).

Parus ater rufipectus, Pražák, *MT. Orn. Ver. Wien*, vol. 13, p. 175 (1894); Hartert, "Vög. Pal. Fauna," part 3, p. 359 (1905).

Parus rufipectus, Dresser, "Man. Pal. Birds," vol. 1, p. 166 (1902).

Parus (Periparus) ater rufipectus, Hellmayr, "Tierreich, Paridae," p. 80 (1903).

Periparus rufipectus, Bianchi, *l.c.*, p. 245; Sharpe, "Handl. B.," vol. 4, p. 325 (1903).

This species, as I have said before, seems to me to be a large race of *P. pekinensis*. It shows some affinity to

P. aemodius, but has not such a strongly developed crest, and it is decidedly larger.

It ranges from Eastern Turkestan to the Tian Shan Mountains. Some specimens in the National collection are apparently from Transcaucasia, but I could not decipher the Russian labels.

When in full plumage, *P. rufipectus* is easily recognised by its rufous-buff under-surface, the sides of the body being of the same colour as the breast: the wing-spots are also tinged with fawn-colour, and are not pure white as in *P. ater*. The back is dark blue-grey, and the fulvous shade on the rump is not particularly pronounced.

Parus britannicus.

Parus britannicus, Sharpe and Dresser, *Ann. and Mag. Nat. Hist.*, (4), vol. 8, p. 437 (1871); Dresser, "Man. Pal. Birds," vol. 1, p. 165 (1902).

Parus ater britannicus, Pražák, *MT. Orn. Ver. Wien*, vol. 18, p. 141 (1894); Hartert, "Vög. Pal. Fauna," part 3, p. 357 (1905).

Parus (Periparus) ater britannicus, Hellmayr, "Tierreich, Paridae," p. 77 (1902).

Periparus britannicus, Bianchi, *t.c.*, p. 245; Sharpe, "Handl. B.," vol. 4, p. 325 (1903).

Similar to *P. ater*, and with white spots on the median and greater coverts, but having the back olive-brown, instead of blue-grey; only the throat black; sides of the body very clear rusty-yellow: bill decidedly more slender.

Hab. British Islands.

Parus britannicus, when a series is compared, need never be confounded with true *P. ater*, for the difference in colour of the back is very perceptible. Freshly moulted birds in August and September are strongly olivaceous on the back, which in *P. ater* is clear blue-grey at that

time of year. On some specimens the white nape-patch shows a slight yellowish tinge, which may be a sign of a freshly moulted young bird.

The olive-brown colour of the back is always very pronounced from August and September to January; it becomes a little less obvious as the breeding-season approaches, and the colour of the back becomes slightly more grey as the plumage becomes worn, but it is never so blue as in the continental bird.

***Parus vieiræ*, n.sp. (Pl.)**

There is in the British Museum a specimen, from Portugal, which appears to belong to an undescribed form of Coal-Tit, and for which I propose the name of *Parus vieiræ*.

Similis *P. britannico*, sed regione uropygiali et corpore subtus pallide cinnamomeis distinguendus. Long. tot. 4.0, culm. 0.4, alae 2.2, cauda 1.6, tarsi 0.7.

Hab. Coimbra, Portugal (Dr. L. Vieira).

The dull cinnamon-rufous colour of the underparts which gives a rufous appearance to the bird is quite different from the fulvescent tint found in *P. ater* and *P. britannicus*. Dr. Sharpe tells me that he has shown the type to Dr. Bianchi and Dr. Hartert, and that they both confirm my idea of its distinctness.

***Parus sardus*.**

Parus sardus, Kleinschmidt, *Orn. MB.*, vol. 11, p. 186 (1903).

Parus ater sardus, Hartert, "Vög. Pal. Fauna," part 3, p. 358 (1905).

This is said by Pastor Kleinschmidt to be easily recognisable from true *P. ater* by its bright rust-coloured sides. The English form, he adds, is not so bright in colour on the flanks, and has likewise a duller colouring

on the back. The British typical form is in every respect much duller and darker in colour than the Sardinian bird.

Hab. Sardinia.

Parus cypriotes.

Parus cypriotes, Dresser, *P.Z.S.*, 1867, p. 563, *id.* "Man. Pal. Birds," vol. 1, p. 165 (1902).

Parus ater cypriotes, Pražák, *MT. Orn. Ver. Wien*, vol. 18, p. 142 (1894); Hartert, "Vög. Pal. Fauna," part 3, p. 359 (1905).

Parus (Periparus) ater cypriotes, Hellm., *t.c.*, p. 77 (1903).

Periparus cypriotes, Bianchi, *t.c.*, p. 244; Sharpe, "Handl. B." vol. 4, p. 325 (1903).

With white spots on the wing-coverts as in *P. ater*, but with an olive-brown back, deeper in colour than in *P. britannicus*; lower neck black, as well as the throat: rest of under-surface of body cream-coloured, the sides and under tail-coverts washed with brownish.

Hab. Island of Cyprus.

Parus ledouci.

Parus ledouci, Malh., *Mém. Soc. H. N. Moselle*, p. 45 (1842): Dresser, "Man. Pal. Birds," vol. 1, p. 166 (1902).

Parus ater ledouci (Malh.), Pražák, *t.c.*, p. 20; Hartert, "Vög. Pal. Fauna," part 3, p. 360 (1905).

Parus (Periparus) ater ledouci, Hellmayr, "Tierreich, Paridae," p. 80 (1903).

Periparus ledouci, Bianchi, *t.c.*, p. 244; Sharpe, "Handl. B.," vol. 4, p. 324 (1903).

This species is confined to N.E. Africa, and is easily recognised by its yellow face and breast.

Its home is in Algeria and N. Tunis.

Parus atlas.

Parus atlas, Meade-Waldo, *Bull. Brit. Orn. Club*, 1901, p. 27; *id.* *Ibis*, 1903, p. 207, pl. 6; Dresser, "Man. Pal. Birds," vol. 1, app. p. 885 (1903).

Parus (Periparus) ater atlas, Hellmayr, "Tierreich, Paridae," p. 79 (1902).

Periparus atlas, Sharpe, "Handl. B.," vol. 4, p. 325 (1903).

Parus ater atlas, Hartert, "Vög. Pal. Fauna," part 3, p. 358 (1905).

This species was discovered by Mr. Meade-Waldo in the Atlas Mountains of Morocco in 1901, where, he says, it abounds throughout the moister woods, and ascends as high as the limit of trees or scrub.

It is placed by the describer, and by Mr. Hellmayr, as most nearly allied to *P. michalowskii*, but distinguished by having the black of the fore-neck descending over the sides of the chest. Specimens in freshly moulted plumage also show white spots on the fore-neck. The sides of the body are dark smoky-buff instead of pale buff.

Dr. Hartert (*t.c.*) places the species between *P. sardus* and *P. pekinensis*.

Parus phaeonotus.

Parus phaeonotus, Blanford, *Ibis*, 1873, p. 88 (1873).

Parus phaeonotus, Dresser, "Man. Pal. Birds," vol. 1, p. 166 (1902).

Parus (Periparus) ater phaeonotus, Hellmayr, "Tierreich, Paridae," p. 79 (1902).

Periparus phaeonotus, Bianchi, *t.c.*, p. 244; Sharpe, "Handl. B.," vol. 4, p. 325 (1903).

Parus ater phaeonotus, Pražák, *MT. Orn. Ver. Wien*, vol. 18, p. 158 (1894); Hartert, "Vög. Pal. Fauna," part 3, p. 361 (1905).

This species is described by Mr. Hellmayr as approaching *P. britannicus* in colour, but exceeding it in size. The upper surface is olive-brown, the rump and upper tail coverts of the same colour as the back. Nape-spot pure white, sometimes very large, sometimes only slightly developed. The white cheek-spot extends low

down on the sides of the neck. Median and greater wing-coverts with large white spots at the ends, which, on the central and inner greater coverts, are surrounded by a small edging of rusty yellow, and, as well as the primary-coverts, show an olive-brownish outer edge. Primaries whitish, the inner ones, as well as the secondaries, olive-greenish, the innermost secondaries more edged with brown. Tail feathers externally edged with olive-grey or brownish. The throat-patch often extends over part of the chest. Middle of under surface of body white; the sides of the body, abdomen, and under tail-coverts washed with fulvous rust-colour, the latter less strongly.

Hab. Persia and Southern Transcaspia.

Parus moltchanowi.

Parus moltchanowi, Menzbier, *Bull. Brit. Orn. Club*, vol. 13, p. 49, (1903); Dresser, "Man. Pal. Birds," vol. 1, app., p. 885 (1903).

Parus ater moltchanowi, Hartert, "Vög. Pal. Fauna," part 3, p. 360 (1905).

In this species the back is said to be of the same colour as in *P. ater*, but of a somewhat lighter grey, the under-surface of the body with scarcely any tint on the sides. Wings and tail as long as in *P. michalowskii*, the bill being much longer and slenderer (cf. Hartert, *l.c.* p. 360).

Hab. Mountains of Southern Crimea.

Parus derjugini.

Periparus ater var. derjugini, Sarudny and Loudon, *Orn. MB.*, vol. 11, p. 129 (1903).

Parus ater derjugini, Hartert, "Vög. Pal. Fauna," part 3, p. 360 (1905).

This form is said to differ from typical *P. ater*, in its longer and heavier bill, and there is a mixture of greyish-brown in the colour of the back.

It is found in the Tschorock District of the Caucasus.

Dr. Hartert says that it has a much longer bill than *P. moltchanowi*, and differs from that species, in that the back is not so pure ashy-grey, but is plainly olivaceous in tint, as in *P. britannicus*, while the sides of the body and the under tail-coverts are not so whitish, but clearly tinged with reddish-brown colour.

From *P. michalowskii* it differs in the much more slender bill and the colouring of the upper surface, which appears more greyish.

Parus michalowskii.

Parus michalowskii, Bogd., *Tr. Soc. Kazan Univ.*, vol. 8, no. 4, p. 87 (1879).

Parus ater michalowskii, Pražák, *MT. Orn. Ver. Wien*, vol. 18, p. 143 (1894); Hartert, "Vög. Pal. Fauna," part 3, p. 360 (1905).

Parus (Periparus) ater michalowskii, Hellmayr, "Tierreich, Paridae," p. 78.

Periparus michalowskii, Bianchi, *t.c.*, p. 244; Sharpe, "Handl. B.," vol. 4, p. 325 (1903).

This is one of the brown-backed section of Coal-Tits, and is very closely allied to *P. phaeonotus*, Blanford, with which Mr. Dresser has united it.

Mr. Hellmayr gives the characters as follows:—Very similar to *P. britannicus*, but with a somewhat brownish tone on the back; the rump without any olive-grey tint. The under surface, however is much lighter, and with much less of a bright wash on the sides. Bill decidedly stouter than in the allied forms, *P. ater* and *P. phaeonotus*.

The habitat is stated by Dr. Hartert to be the Southern Caucasus, in the river system of the Kura, Sekarsk to Kedabeg and Lenkoran.

Parus aemodius.

Parus aemodius, Hodgs., *J. A. S. Beng.*, vol. 13, p. 943 (1844).

Parus ater aemodius, Pražák, *t.c.*, p. 174 (1894); Hartert, "Vög. Pal. Fauna," part 3, p. 358 (1905).

Lophophanes aemodius, Oates, "Faun. Brit. Ind., Birds," vol. 1, p. 58 (1889).

Periparus aemodius, Bianchi, *t.c.*, p. 109 (1902); Sharpe, "Handl. B.," vol. 4, p. 326 (1903).

Parus (Periparus) ater aemodius, Hellmayr, "Tierreich, Paridae," p. 79 (1902).

This species is distinguished by Mr. Hellmayr from the other races of *P. ater*, on account of its ochre-yellow under surface. I should have called the breast of *P. aemodius* pale 'cinnamon-buff,' but I find that it agrees most nearly with the 'ochraceous-buff' of Ridgway's 'Nomenclature of colours.' In any case, this rufescent tint of the under surface generally serves to distinguish *P. aemodius* and *P. rufipectus* from *P. ater* and its allies, though *P. pekinensis* often shows a rufous tint on the under surface. In *P. ater* and the other forms there is sometimes a tint of pale buff or cinnamon, but their general aspect below is greyish white.



1. *PARUS VIEIRÆ*
2. „ *BRITANNICUS*.

West, Newman imp.

PAT. JAN. 21, 1908



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